

## 1 CLAIMS:

2 1. A method of displaying and updating television  
 3 schedule information data in a television schedule information  
 4 transmission system having a central data processing system  
 5 and a plurality of subscriber systems, the method comprising  
 the steps of:

6 receiving the television schedule information data and  
 7 instructions related to the television schedule information  
 8 data for one or more of the plurality of subscriber systems  
 9 via a television telecast signal;

10 extracting a portion of the television schedule  
 11 information data from the television telecast signal  
 12 responsive to the received instructions;

13 storing the portion of the television schedule  
 14 information data in a memory at the one or more of the  
 15 plurality of subscriber systems;

16 preparing portions of the television schedule information  
 17 data responsive to at least one of the received instructions;  
 18 and

19 displaying the portions of the television schedule  
 20 information data on a display monitor.

21 2. The method of claim 1, wherein the television  
 22 schedule information data is received by a subscriber system  
 23 if the instructions are addressed to that subscriber system.  
 24

25 3. The method of claim 2, wherein a batch number as  
 26 part of an instruction is used as a group address to send the  
 27 instruction to at least one subscriber system sharing the same  
 28 batch number.  
 29

30 4. The method of claim 2, wherein one of the  
 31 instructions is an authorization command authorizing the  
 32 subscriber system to begin collecting and displaying the  
 33 television schedule information data.  
 34

1           5.    The method of claim 1, wherein at least one of the instructions received is private to at least one of the subscriber system.

5           6.    The method of claim 1, wherein the television schedule information data is received in the blanking interval of the television telecast signal.

10          7.    The method of claim 1, wherein the receiving step comprises the step of decrypting an encrypted instruction.

8.    The method of claim 1, wherein the preparing step comprises the steps of:

15          executing the at least one of the received instructions;  
determining if certain of the television schedule information has already been received by the subscriber system; and

20          receiving the certain of the television schedule information if it has not already been received.

9.    The method of claim 1, further comprising the steps of:

25          receiving a daylight change command defining when a next daylight change will occur; and  
adding a time-zone offset to a local time to show the correct adjusted local time when the next daylight change occurs.

30          10.   The method of claim 1, wherein the preparing step comprises the steps of:

receiving an instruction including channel ID numbers and television scheduling information;

35          matching the received channel ID numbers to a list of channel ID numbers stored in the memory representing the valid channels in the subscriber system; and

compiling the television scheduling information on the channels for which the channel ID number in the list stored in

1 the memory representing the valid channel matches that of the  
received channel ID number.

5 11. The method of claim 10, further comprising the steps  
of:  
receiving a second instruction providing at least 24  
hours of television scheduling information data.

10 12. The method of claim 10, further comprising the steps  
of:  
receiving a show title instruction containing a name of  
a television program;  
comparing the name of the television program to a show  
list maintained in the memory;  
15 saving the show title instruction in the database if  
there is a match between the name of the television program  
and any entry in the show list; and  
ignoring the show title instruction in the memory if  
there is not a match between the name of the television  
20 program and any entry in the show list.

13. The method of claim 12, wherein the name of a  
television program is compressed text.

25 14. The method of claim 1, wherein the storing step  
comprises the steps of:

periodically running a garbage collection process to  
collect unused memory blocks;  
recombining the unused memory blocks into larger memory  
30 blocks; and  
making the larger memory blocks accessible by the  
computer program.

35 15. The method of claim 1, wherein the portion of the  
television schedule information data is stored in a database  
as database items in the memory.

1           16. The method of claim 15, wherein the database items  
are arranged hierarchically in descending order as a list of  
channels and a list of show titles, show description, show  
start time and show durations for each channel.

5           17. The method of claim 16, wherein the database items  
are further arranged hierarchically in descending order as a  
theme table defining theme categories, theme sub-table  
defining theme sub-categories, and theme show table defining  
10 themes of a selected list of shows.

15           18. A system for displaying and updating television  
schedule information data in a subscriber system included in  
a television schedule information transmission system having  
a central data processing system and a plurality of subscriber  
systems, comprising of:

          a microprocessor at each of the plurality of subscriber  
systems;

20           a decoder at each of the plurality of subscriber systems  
for receiving the television schedule information data and  
instructions related to the television schedule information  
data for one or more of the plurality of subscriber systems  
via a television telecast signal;

25           means for extracting at least a portion of the television  
schedule information data from the television telecast signal  
responsive to the instructions included in the instructions;

          a memory for storing the at least a portion of the  
television schedule information data;

30           code for the microprocessor for preparing portions of the  
television schedule information data responsive to the  
instructions included in the instructions; and

          a display for displaying the portions of the television  
schedule information data on the display monitor.

35           19. The system of claim 18, wherein the television  
schedule information data is received by a subscriber system  
if the instructions are directed to that subscriber system.

1           20. The system of claim 19, further comprising a batch  
number as part of an instruction for a group address to direct  
the instruction to at least one subscriber system sharing the  
same batch number.

5           21. The system of claim 19, wherein one of the received  
instructions is an authorization command authorizing the  
subscriber system to begin collecting and displaying the  
television schedule information data.

10          22. The system of claim 18, wherein at least one of the  
instructions received is private to at least one of the  
subscriber system.

15          23. The system of claim 18, wherein the television  
schedule information data is received in the blanking interval  
of the television telecast signal.

20          24. The system of claim 18, wherein at least one of the  
received instructions is an encrypted instruction.

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